

Claims

[c1] What is claimed is:

1.A method for adjusting a position of a mounting plate relative to a tray of an optical disk drive for preventing an optical disk disposed on the mounting plate from colliding with the tray, the method comprising the steps of:
forming a plurality of bores on the tray;
forming a plurality of through holes in the mounting plate corresponding to the bores;
installing a plurality of screws into the through holes respectively;
threading a plurality of nuts onto the screws respectively so as to fasten the screws onto the mounting plate;
threading the screws into the corresponding bores so as to fasten the mounting plate onto the tray; and
adjusting a depth of each of the screws in the bore so as to adjust the position of the mounting plate relative to the tray.

[c2] 2.The method of claim 1, wherein each of the bores is a threaded hole in a copper pillar, the method further comprising installing the copper pillars on the tray.

[c3] 3.The method of claim 2, wherein each of the copper pil-

lars is a cylinder with an indent at the center of one face, and the screw threads are positioned on an inside wall of the indent.

[c4] 4. The method of claim 2, wherein each of the copper pillars is a hollow cylinder, and the screw threads are positioned on an inside wall of the cylinder.

[c5] 5. The method of claim 1 further comprising installing a plurality of dampers between the nuts and the mounting plate, and between a head of each of the screws and the mounting plate for preventing the optical disk drive from being affected by vibrations during operation.

[c6] 6. The method of claim 5, wherein the dampers are rubber pads.

[c7] 7. The method of claim 1 further comprising applying glue to the threads of the screws for fixing the depth of each of the screws in the bores.

[c8] 8. A position adjustment device for adjusting a position of a mounting plate having a plurality of through holes relative to a tray of an optical disk drive for preventing an optical disk mounted on the mounting plate from colliding with the tray, the device comprising:
a plurality of bases installed on the tray corresponding to the through holes on the mounting plate;

a plurality of screws threaded into the bases through the corresponding through holes to fasten the mounting plate onto the tray; and
a plurality of nuts threaded onto the screws to fasten the screws onto the mounting plate.

[c9] 9. The device of claim 8, wherein a depth of each of the screws in the corresponding base is set to adjust the relative alignment of the mounting plate and the tray.

[c10] 10. The device of claim 8, wherein each of the bases is a copper pillar with screw threads.

[c11] 11. The device of claim 10, wherein the copper pillar is a cylinder with an indent at the center of one face, and the screw threads are positioned on an inside wall of the indent.

[c12] 12. The device of claim 10, wherein the copper pillar is a hollow cylinder, and the screw threads are positioned on an inside wall of the cylinder.

[c13] 13. The device of claim 8 further comprising a plurality of dampers located between the nuts and the mounting plate, and between a head of each of the screws and the mounting plate for preventing the optical disk drive from being affected by vibrations during operation.

- [c14] 14. The device of claim 13, wherein the dampers are rubber pads.
- [c15] 15. A mounting structure of an optical disk drive comprising:
a mounting plate comprising a notched base plate;
a tray comprising a base;
a damper installed on the notched base plate; and
a screw, wherein a portion of the screw is threaded into the base, and the damper elastically connects the mounting plate to the screw;
wherein the screw is capable of being rotated in the base to adjust a depth of the screw threaded into the base to set a distance between the mounting plate and the tray.
- [c16] 16. The mounting structure of claim 15, wherein the screw further comprises a shaft and a head, and the mounting structure further comprises a nut, the nut being threaded onto the shaft of the screw so that a predetermined clearance is left between the nut and the head of the screw for installing the damper.
- [c17] 17. The mounting structure of claim 15, wherein the base is a copper pillar with an inside circular sidewall, the circular sidewall having screw threads for accepting the screw.

[c18] 18. The mounting structure of claim 15, wherein the damper is cylindrical and comprises an upper large diameter portion and a lower large diameter portion, a space between the upper and lower large diameter portions having a smaller diameter for fitting into the notched base plate of the mounting plate.

[c19] 19. The mounting structure of claim 15, wherein the screw further comprises a glue layer on the surface of the threads of the screws for fixing the depth of the screw in the base.